A vector error correction model (VECM) approach in explaining the relationship between interest rate and inflation towards exchange rate volatility in Malaysia

ABSTRACT

The exchange rate is one of the most important determinants of a country's relative level of economic health. Exchange rate plays a vital role in a country's level of trade, which is critical to most free market economies in the world. This paper is an attempt to analyze the relationship between interest rate, inflation rate and exchange rate volatility in Malaysia covering the period between 1999-2009. This paper used time-series Vector Error Correction Model (VECM) approach of stationarity test, cointegration test, stability test and Granger causality test. Impulse Response Function (IRF) has also been generated to explain the response to shock amongst the variables. The results show that the inflation rate impacts the interest rate as indicated by Granger-cause. Subsequently the interest rate influences the exchange rate as shown by the Granger cause test. Taking into account a long term relationship, interest rate moves positively while inflation rate goes negatively towards exchange rate volatility in Malaysia. The implication of this study is that increasing the interest rate can be efficient in restraining exchange rate volatility. Future researchers should attempt to use panel data and cover longer study duration of above10 years by using other variables.

Keyword: Exchange rate; Interest rate; Inflation rate; Vector error correction model (VECM); Impulse response function